

## **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

- 1 1. (Currently Amended) A wireless audio transmission and reception system  
2 comprising"  
  
3 a first encoder to receive an analog signal, to digitize said analog  
4 signal, and to compress the digitized analog signal using MP-3  
5 compression;  
  
6 a frame formatter in communication with the first encoder to divide  
7 the compressed digitized analog signal into packets, placing  
8 synchronization patterns at a beginning of each packet,  
9 assembling a number of packets into a frame; and placing an  
10 end-of-frame pattern at an end of said frame;  
  
11 a bit-stuffing circuit in communication with the frame formatter to  
12 insert bits into any frame having insufficient transitions, whereby  
13 said insufficient transitions cause errors in receiving the  
14 compressed digitized analog signal;

15 ~~a modulator in communication with the first encoder to receive the~~  
16 ~~compressed digitized analog signal and to modulate a carrier~~  
17 ~~frequency with the compressed digitized analog signal;~~

18 ~~a transmitter in communication with the modulated carrier signal to~~  
19 ~~transfer the modulated carrier signal wirelessly;~~

20 ~~a receiver to receive the modulated carrier signal;~~

21 ~~a demodulator in communication with the receiver in~~  
22 communication with said bit stuffing circuit to synchronize and  
23 extract the compressed digitized analog signal from the  
24 modulated a carrier signal modulated with said compressed  
25 digitized analog signal; and

26 a frame remover in communication with the demodulator to remove  
27 synchronization patterns from a beginning of each packet of the  
28 compressed digitized analog signals and end-of-frame patterns  
29 from an end of each frame of packets of the compressed  
30 digitized analog signals; and

31 a bit-extractor circuit in communication with said frame remover to  
32 remove bits inserted into the compressed digitized analog signal  
33 to restore original transitions of the compressed digitized analog  
34 signal.

35                   ~~a first decoder in communication with the demodulator to~~  
36                   ~~decompress the compressed digitized analog signal using MP-3~~  
37                   ~~decompression and to convert said digitized analog signal to a~~  
38                   ~~reproduction of the analog signal.~~

1    2.    (Cancelled) The system of claim 1 further comprising a frame formatter in  
2           communication between the first encoder and the modulator to divide the  
3           compressed digitized analog signal into packets, placing synchronization  
4           patterns at a beginning of each packet, assembling a number of packets  
5           into a frame; and placing an end-of-frame pattern at an end of said frame.

1    3.    (Cancelled) The system of claim 2 further comprising a bit-stuffing circuit  
2           in communication between the frame formatter and the modulator to insert  
3           bits into any frame having insufficient transitions, whereby said insufficient  
4           transitions cause errors in receiving the compressed digitized analog  
5           signal.

1    4.    (Currently Amended) The system of ~~claim 3~~ claim 1 further comprising a  
2           second encoder in communication with said first encoder to encode the  
3           frames of the compressed digitized analog signal to a non-return-to-zero  
4           invert-on-zeros (NRZI) coding.

1    5.    (Currently Amended) The system of claim 1 further comprising a second  
2           decoder placed in communication ~~between~~ with the demodulator and the

3 | ~~first decoder~~ to restore a NRZI encoded, compressed digitized analog  
4 signal to the compressed digitized analog signal.

1 6. (Cancelled) The system of claim 5 further comprising a bit-extractor circuit  
2 in communication between the second decoder and the first decoder to  
3 remove bits inserted into the compressed digitized analog signal to restore  
4 original transitions of the compressed digitized analog signal.

1 7. (Cancelled) The system of claim 1 further comprising a frame remover in  
2 communication between the demodulator and the first decoder to remove  
3 synchronization patterns from a beginning of each packet of the  
4 compressed digitized analog signals and end-of-frame patterns from an  
5 end of each frame of packets of the compressed digitized analog signals.

1 8. (Original) The system of claim 1 wherein the carrier frequency is at least  
2 900 MHz.

1 9. (Original) The system of claim 1 wherein a compression ratio of the  
2 digitized analog signal to the compressed digitized analog signal is from  
3 approximately 8:1 to approximately 96:1 and is determined by a quality of  
4 audio reproduction of the analog signal

1 10. (Currently Amended) A wireless audio transmitter system comprising"

2 a first encoder to receive an analog signal, to digitize said analog  
3 signal, and to compress the digitized analog signal using MP-3  
4 compression;

5 a frame formatter in communication with the first encoder to divide  
6 the compressed digitized analog signal into packets, placing  
7 synchronization patterns at a beginning of each packet,  
8 assembling a number of the packets to form a frame and  
9 placing an end-of-frame pattern at an end of said frame;

10 a bit-stuffing circuit in communication with the frame formatter to  
11 insert bits into any frame having insufficient transitions, whereby  
12 said insufficient transitions cause errors in receiving the  
13 compressed digitized analog signal; and

14 ~~a modulator in communication with the first encoder to receive the~~  
15 ~~compressed digitized analog signal and to modulate a carrier~~  
16 ~~frequency with the compressed digitized analog signal; and~~

17 ~~a transmitter in communication with the modulated carrier signal to~~  
18 ~~transfer the modulated carrier signal wirelessly.~~

1 11. (Cancelled) The system of claim 10 further comprising a frame formatter in  
2 communication between the first encoder and the modulator to divide the  
3 compressed digitized analog signal into packets, placing synchronization

4 patterns at a beginning of each packet, assembling a number of the  
5 packets to form a frame and placing an end-of-frame pattern at an end of  
6 said frame.

1 12. (Cancelled) The system of claim 11 further comprising a bit-stuffing circuit  
2 in communication between the frame formatter and the modulator to insert  
3 bits into any frame having insufficient transitions, whereby said insufficient  
4 transitions cause errors in receiving the compressed digitized analog  
5 signal.

1 13. (Currently Amended) The system of ~~claim 12~~ claim 10 further comprising a  
2 second encoder to encode the frames of the compressed digitized analog  
3 signal to a non-return-to-zero invert-on-zeros (NRZI) coding.

1 14. (Original) The system of claim 10 wherein the carrier frequency is at least  
2 900 MHz.

1 15. (Original) The system of claim 10 wherein a compression ratio of the  
2 digitized analog signal to the compressed digitized analog signal is from  
3 approximately 8:1 to approximately 96:1 and is determined by a quality of  
4 audio reproduction of the analog signal

1 16. A wireless audio receiver system comprising"

2 ~~a receiver to receive a modulated carrier signal;~~

3 a demodulator in communication with ~~the receiver~~ said bit stuffing  
4 circuit to synchronize and extract a compressed digitized analog  
5 signal from ~~the modulated~~ a carrier signal modulated with said  
6 compressed digitized analog signal;

7 a frame remover in communication between the demodulator and  
8 the first decoder to remove synchronization patterns from a  
9 beginning of each packet of the compressed digitized analog  
10 signals and end-of-frame patterns from an end of a frame of  
11 packets of the compressed digitized analog signals; and

12 a bit-extractor circuit in communication frame remover to remove  
13 bits inserted into the compressed digitized analog signal to  
14 restore original transitions of the compressed digitized analog  
15 signal

16 ~~a first decoder in communication with the demodulator to~~  
17 ~~decompress the compressed digitized analog signal using MP-3~~  
18 ~~decompression and to convert said digitized analog signal to a~~  
19 ~~reproduction of an analog signal.~~

1 17. (Currently Amended) The system of claim 16 further comprising a second  
2 decoder placed in communication ~~between~~ with the demodulator and the  
3 ~~first decoder~~ to restore a NRZI encoded, compressed digitized analog  
4 signal to the compressed digitized analog signal.

- 1 18. (Cancelled) The system of claim 17 further comprising a bit-extractor  
2 circuit in communication between the second decoder and the first  
3 decoder to remove bits inserted into the compressed digitized analog  
4 signal to restore original transitions of the compressed digitized analog  
5 signal.
- 1 19. (Cancelled) The system of claim 16 further comprising a frame remover in  
2 communication between the demodulator and the first decoder to remove  
3 synchronization patterns from a beginning of each packet of the  
4 compressed digitized analog signals and end-of-frame patterns from an  
5 end of a frame of packets of the compressed digitized analog signals.
- 1 20. (Original) The system of claim 16 wherein the carrier frequency is at least  
2 900 MHz.
- 1 21. (Original) The system of claim 16 wherein a compression ratio of the  
2 digitized analog signal to the compressed digitized analog signal is from  
3 approximately 8:1 to approximately 96:1 and is determined by a desired  
4 quality of audio reproduction of the analog signal.
- 1 22. (Currently Amended) A method for wireless transmission of an analog  
2 signal comprising the steps of:
- 3 acquiring the analog signal;
- 4 digitizing said analog signal;



5 compressing the digitized analog signal according to an MP-3  
6 encoding algorithm;

7 forming frames of the compressed digitized analog signal by the  
8 steps of:

9 assembling a plurality of bytes of the compressed digitized  
10 analog signal to create packets,

11 placing a synchronization pattern at a beginning of each  
12 packet,

13 assembling a plurality of said packets to form frames, and

14 placing an end-of-frame pattern at an end of each frame;

15 inserting additional bits within any frame having insufficient  
16 transitions, whereby said insufficient transitions cause errors in  
17 receiving the compressed digitized analog signal

18 ~~modulating a carrier signal with the compressed digitized analog~~  
19 ~~signal; and~~

20 ~~transmitting said modulated carrier signal;~~

21 ~~receiving said modulated carrier signal;~~

22 demodulating ~~said modulated~~ a carrier signal modulated with said  
23 compressed digitized analog signal to extracted the compressed  
24 digitized analog signal;

25 removing frames from the compressed digitized analog signal by:

26 removing synchronization patterns from a beginning  
27 of each packet, and

28 removing an end-of-frame pattern from each from an  
29 end of each frame; and

30 extracting bits inserted to the compressed digitized analog signal to  
31 restore original transitions of the compressed digitized analog  
32 signal.

33 ~~decompressing the compressed digitized analog signal according~~  
34 ~~to an MP-3 decoding algorithm; and~~

35 ~~converting the digitized analog signal to a reproduced analog~~  
36 ~~signal.~~

1 23. (Cancelled) The method of claim 22 further comprising the step of forming  
2 frames of the compressed digitized analog signal by the steps of:

3 assembling a plurality of bytes of the compressed digitized analog  
4 signal to create packets

5                   placing a synchronization pattern at a beginning of each packet;

6                   assembling a plurality of said packets to form frames; and

7                   placing an end-of-frame pattern at an end of each frame.

1   24.   (Cancelled) The method of claim 23 further comprising the step of:

2                   inserting additional bits within any frame having insufficient  
3                   transitions, whereby said insufficient transitions cause errors in  
4                   receiving the compressed digitized analog signal.

1   25.   (Currently Amended) The method of ~~claim 27~~ claim 22 further comprising  
2                   the step of:

3                   encoding the compressed digitized analog signal to an NRZI  
4                   format.

1   26.   (Original) The method of claim 22 further comprising the step of:

2                   decoding an NRZI encoded, compressed, and digitized analog  
3                   signal to restore the compressed digitized analog signal.

1   27.   (Cancelled) The method of claim 22 further comprising the step of:

2                   extracting bits inserted to the compressed digitized analog signal to  
3                   restore original transitions of the compressed digitized analog  
4                   signal.

- 1 28. (Cancelled) The method of claim 22 further comprising the step of:  
2 removing frames from the compressed digitized analog signal by  
3 removing synchronization patterns from a beginning of each  
4 packet; and  
5 removing an end-of-frame pattern from each from an end of each  
6 frame.
- 1 29. (Original) The method of claim 22 wherein the carrier signal is at least 900  
2 MHz.
- 1 30. (Original) The method of claim 22 wherein a compression ratio of the  
2 digitized analog signal to the compressed digitized analog signal is from  
3 approximately 8:1 to approximately 96:1 and is determined by a desired  
4 *quality of audio reproduction of the analog signal.*
- 1 31. (New) The system of claim 1 further comprising a modulator in  
2 communication with the first encoder to receive the compressed digitized  
3 analog signal and to modulate a carrier frequency with the compressed  
4 digitized analog signal;
- 1 32. (New) The system of claim 31 further comprising  
2 a transmitter in communication with the modulator to transfer the  
3 modulated carrier signal wirelessly; and

4                   a receiver to receive the wirelessly transmitted modulated carrier  
5                   signal;

1   33.   (New) The system of claim 1 further comprising a first decoder in  
2           communication with the bit extractor to decompress the compressed  
3           digitized analog signal using MP-3 decompression and to convert said  
4           digitized analog signal to a reproduction of the analog signal.

1   34.   (New) The system of claim 10 further comprising:  
  
2                   a modulator in communication with the first encoder to receive the  
3                   compressed digitized analog signal and to modulate a carrier  
4                   frequency with the compressed digitized analog signal; and  
  
5                   a transmitter in communication with the modulator to transfer the  
6                   modulated carrier signal wirelessly.

1   35.   (New) The system of claim 16 further comprising a receiver to receive a  
2           wirelessly transmitted modulated carrier signal.

1   36.   (New) The system of claim 16 further comprising a first decoder in  
2           communication with the demodulator to decompress the compressed  
3           digitized analog signal using MP-3 decompression and to convert said  
4           digitized analog signal to a reproduction of an analog signal.

1   37.   (New) The method of claim 22 further comprising the step of:

2 decompressing the compressed digitized analog signal according  
3 to an MP-3 decoding algorithm; and  
4 converting the digitized analog signal to a reproduced analog  
5 signal.